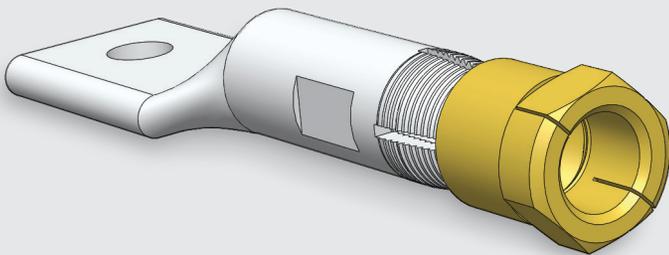




# The **SNAP!** Concept

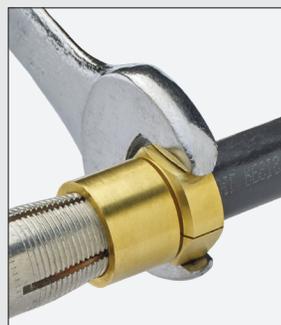


The revolutionary concept behind Greaves SNAP connectors combines design with mechanical and metallurgical principals to deliver:

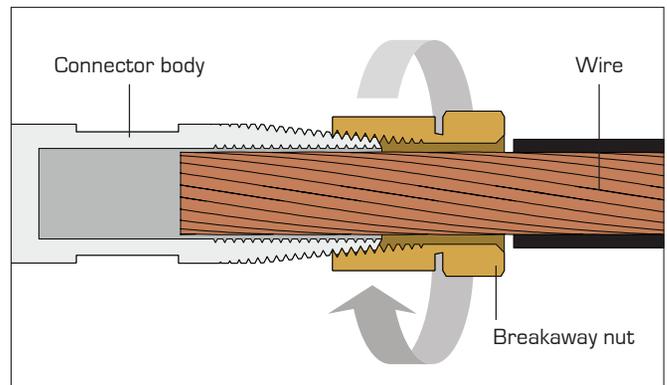
- ▶ Superior contact and pull-out strength
- ▶ Quick installation with simple tools
- ▶ UL tested and proven reliability
- ▶ Inspectability

With the introduction of SNAP connectors, Greaves takes a giant step beyond the world of conventional compression connectors and the bulky, costly tools needed to install them.

Using just a standard wrench, SNAP connectors achieve the same or better conductivity and pull-out strength as conventional compression connections.

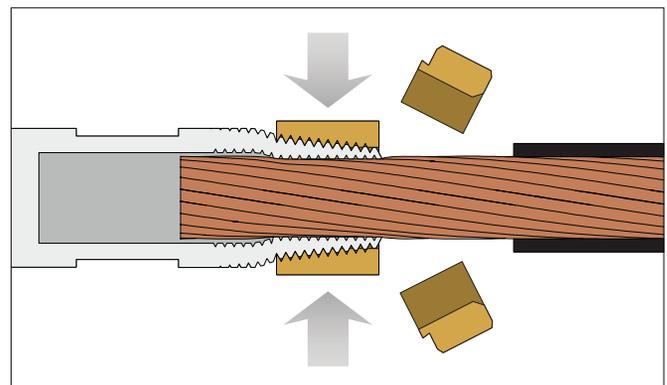


## How it works. Why it works.



### Beginning compression

After a wire is inserted into the SNAP connector body, the turns of a standard wrench drive the nut up the tapered threads, compressing the serrated interior surfaces of the connector body onto the wire and deforming the body and wire uniformly along the length of the nut.



### Achieving compression

Turning force increases as the nut is tightened, reaching the torque level that has been pre-calibrated to ensure the proper compression. The hex portions of the nut then snap off, leaving the cylindrical portion locked in place, forming a solid connection that meets or exceeds the conductivity and pull-out strength of a compression connection.

## Design innovations achieve superior surface contact and pull-out strength

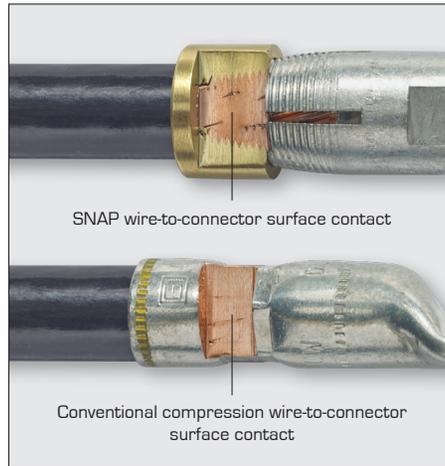
The Greaves SNAP connector is unlike conventional compression connectors, and may be different from anything a contractor or inspector has seen before. The unique design includes two basic elements: a tin-plated copper body with tapered, threaded entry, and an engineered brass snap-off nut with inner taper that matches the body.



To achieve the connection, the nut is tightened with a standard wrench (open-end or adjustable). When tightened, the matching tapers evenly compress the copper body into the conductor, and the serrated inner surfaces bite for optimum pull-out strength. As the nut is tightened further, the hex portions snap off at their pre-set torque. The breaking torque is engineered into each size nut to a level that exceeds UL torque requirements.

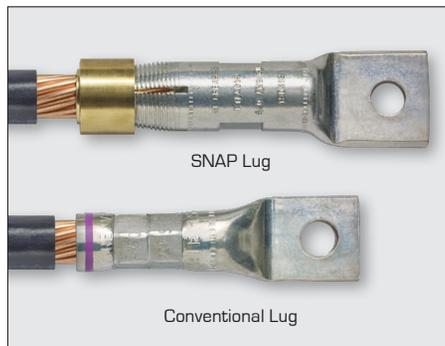
### SNAP Breakoff Torque Test Results

Cable Sizes	UL Required Torque	SNAP Breakoff Torque Minimum
#2	140	165
1/0	180	205
2/0	235	260
3/0	290	315
4/0	345	370
250	400	425
350	495	525
500	580	610



## Conductivity

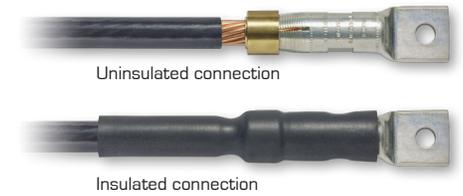
There is an immediate distinction between a conventional compression connector and a SNAP lug. With an equal inner diameter to fit the wire, the wall of a SNAP connector is much heavier, which results in benefits for both electrical and thermal conductivity. From a materials perspective, the copper body and the brass nut have nearly the same thermal expansion coefficient, so there have been no thermal issues in testing by UL or at Greaves.



## Inspectability

The unique SNAP connector design offers more convenience for inspection than conventional compression connectors. First, the slotted windows of the connector body allow visual verification that the stripped wire is inserted beyond the threaded compression area where the nut will tighten onto the wire. Then, when the connection is completed, the two hex nut portions are absent, leaving only

the cylindrical portion; this shows that the connection is complete and solid. Finally, even after insulation is installed (cold-shrink, heat-shrink, tape, etc.) the resulting shape without the hex nut is visually apparent.



## UL-tested and proven to exceed conventional compression results

SNAP connectors are UL listed under UL 486A486B for 'wire Connectors (Certificate number 20190122, File E28698). Greaves designed SNAP connectors to exceed UL requirements for pullout testing. As tested under the same conditions as conventional compression connectors, SNAP connectors meet or exceed UL requirements.

### SNAP Pull-out Test Results

Cable Sizes	UL 486A-486B Pullout test (lbs)	SNAP Results (average)
#2	180	750
1/0	250	750
2/0	300	1000
3/0	350	1000
4/0	450	1000
250	500	1000
350	600	1000
500	800	1000



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